* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 4	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS 5	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
NEWS 6	AUG 18	Data available for download as a PDF in RDISCLOSURE
NEWS 7	AUG 18	Simultaneous left and right truncation added to PASCAL
NEWS 8	AUG 18	FROSTI and KOSMET enhanced with Simultaneous Left and Righ Truncation
NEWS 9	AUG 18	Simultaneous left and right truncation added to ANABSTR
NEWS 10	SEP 22	DIPPR file reloaded
NEWS 11	DEC 08	INPADOC: Legal Status data reloaded
NEWS 12	SEP 29	DISSABS now available on STN
NEWS 13	OCT 10	PCTFULL: Two new display fields added
NEWS 14	OCT 21	BIOSIS file reloaded and enhanced
NEWS 15	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 16	NOV 24	MSDS-CCOHS file reloaded
NEWS 17	DEC 08	CABA reloaded with left truncation
NEWS 18	DEC 08	IMS file names changed

NEWS EXPRESS	NOVEMBER 14 CURRENT WINDOWS VERSION IS V6.01c, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:04:58 ON 09 DEC 2003

=> **file caplus**

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 08:05:08 ON 09 DEC 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

h eb c g cg b cg eb

FILE COVERS 1907 - 9 Dec 2003 VOL 139 ISS 24
FILE LAST UPDATED: 8 Dec 2003 (20031208/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s coal and polysaccharide
        205824 COAL
         35049 COALS
        207632 COAL
                 (COAL OR COALS)
         50709 POLYSACCHARIDE
         62370 POLYSACCHARIDES
         79139 POLYSACCHARIDE
                 (POLYSACCHARIDE OR POLYSACCHARIDES)
L1         147 COAL AND POLYSACCHARIDE

=> s polysaccaride (P) resin
             9 POLYSACCARIDE
            10 POLYSACCARIDES
            19 POLYSACCARIDE
                 (POLYSACCARIDE OR POLYSACCARIDES)
        524474 RESIN
        356724 RESINS
        646434 RESIN
                 (RESIN OR RESINS)
L2           0 POLYSACCARIDE (P) RESIN

=> del l2 y

=> s polysaccaride (P) resin
             9 POLYSACCARIDE
            10 POLYSACCARIDES
            19 POLYSACCARIDE
                 (POLYSACCARIDE OR POLYSACCARIDES)
        524474 RESIN
        356724 RESINS
        646434 RESIN
                 (RESIN OR RESINS)
L2           0 POLYSACCARIDE (P) RESIN

=> del l2 y

=> s resin (P) polysaccharide
        524474 RESIN
        356724 RESINS
        646434 RESIN
                 (RESIN OR RESINS)
         50709 POLYSACCHARIDE
         62370 POLYSACCHARIDES
         79139 POLYSACCHARIDE
                 (POLYSACCHARIDE OR POLYSACCHARIDES)
L2        1012 RESIN (P) POLYSACCHARIDE

=> s l2 and coal
        205824 COAL
         35049 COALS
        207632 COAL
                 (COAL OR COALS)
L3          10 L2 AND COAL
```

eb

h eb c g cg b cg

=> d l3 1-10 all

L3 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 2003:174001 CAPLUS
DN 138:224019
ED Entered STN: 07 Mar 2003
TI Synthetic fuel briquet comprising **coal** dust, water and a reactive organic compound, and a process for making such synthetic fuel
IN Cutright, Preston; Gambino, James
PA Elementis Specialties, Inc., USA
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C10L001-10
ICS C10L005-44; C10L005-12; C10L005-14
NCL 044553000; 044560000
CC 51-17 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 60

Applicant

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003041509	A1	20030306	US 2001-935107	20010823
	DE 10230814	A1	20030306	DE 2002-10230814	20020708
	GB 2381003	A1	20030423	GB 2002-16877	20020719
PRAI	US 2001-935107	A	20010823		

AB The present invention discloses a compacted synthetic fuel briquet made of at least 90% **coal** dust, water and a polymeric binder reactive with the **coal** dust to form a chem. bond with the **coal** dust and provides a product very similar to **coal**. The product surprisingly in some cases provides higher BTU value than **coal** alone (up to 5 to 1000 BTU per ton more than counterpart **coal**), does not produce the waste inorg. ash at the users' facility of (or many org. chems. such as tar) and can reduce the moisture of **coal** dust and give increased green strength.

ST fuel briquet **coal** dust water reactive polymer binder

IT IR spectroscopy
(Fourier-transform, of **coal** dust and briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Anthracite
RL: TEM (Technical or engineered material use); USES (Uses)
(dust; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Strength
(green strength of briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Compaction
(into briquets; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Chemisorption
(of polymer binders onto **coal** dust; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Functional groups
(oxygen-contg. groups, large increases from including additive; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Binders

h eb c g cg b cg eb

Fuel briquets
(synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Polysaccharides, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT **Coal** dust
RL: TEM (Technical or engineered material use); USES (Uses)
(synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT Fuels
(synthetic; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 500881-66-3, JA 250
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(**polysaccharide resin**; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 500886-05-5, ECOPlus
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(starch-based resin; synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

IT 79-06-1D, Acrylamide, copolymers contg. 79-10-7D, Acrylic acid, sodium salt, copolymers contg. 7732-18-5, Water, uses 9005-25-8D, Starch, functionalized derivs. 25085-02-3, Sodium acrylate-acrylamide copolymer 58916-80-6, Magnafloc 155 105864-14-0, JK 270 180984-23-0, JA 250-3 202289-66-5, ECO **polysaccharide resin**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(synthetic fuel comprising **coal** dust, water and reactive polymer binder, and process for making such synthetic fuel briquet)

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 2000:511613 CAPLUS
DN 133:210155
ED Entered STN: 28 Jul 2000
TI Recovery of boron and rare metals from sea water by chemically-modified novel chitosan resins
AU Kondo, K.; Matsumoto, M.
CS Department of Chemical Engineering and Materials Science, Doshisha University, Kyoto, 610-0321, Japan
SO World Salt Symposium, 8th, The Hague, Netherlands, May 7-11, 2000 (2000), Volume 2, 1205-1206. Editor(s): Geertman, Rob M. Publisher: Elsevier Science B.V., Amsterdam, Neth.
CODEN: 69AELQ
DT Conference
LA English
CC 49-1 (Industrial Inorganic Chemicals)
Section cross-reference(s): 38, 54, 61
AB The adsorption characteristics of B on chitosan resins are qual. investigated for the removal of B from a B mine and the desulfurizing equipment in **coal**-fired steam power stations. We prepd. a novel chitosan-supported sulfonic acid resin modified by propane sultone and the adsorption of metal ions is examd. by using both the crosslinked chitosan-supported sulfonic acid resin and a crosslinked chitosan resin.
ST boron recovery seawater chitosan resin; rare metal recovery seawater

eb

b eb c g cg b cg

chitosan resin

IT **Polysaccharides**, uses
RL: MOA (Modifier or additive use); USES (Uses)
(chitosan modified by; recovery of boron and rare metals from sea water by chem.-modified novel chitosan **resins**)

IT Adsorption
Cation exchangers
Seawater
(recovery of boron and rare metals from sea water by chem.-modified novel chitosan resins)

IT 7440-42-8P, Boron, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(recovery of boron and rare metals from sea water by chem.-modified novel chitosan resins)

IT 9012-76-4, Chitosan
RL: TEM (Technical or engineered material use); USES (Uses)
(recovery of boron and rare metals from sea water by chem.-modified novel chitosan resins)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Choi, K; Macromol Chem, Macromol Symp 1990, V33, P55 CAPLUS
(2) Hirotsu, T; Bull Soc Sea Water Sci Jpn 1995, V49, P202 CAPLUS
(3) Inukai, Y; Advances in Chitin Science 1998, V2, P513
(4) Inukai, Y; Anal Chim Acta 1997, V343, P275 CAPLUS
(5) Inukai, Y; Anal Sci 1997, V13, P221 CAPLUS
(6) Kondo, K; J Chem Eng Japan 1997, V30, P846 CAPLUS
(7) Kondo, K; Separ Sci Technol 1996, V31, P1771 CAPLUS
(8) Kurita, K; Kagaku Kogyo 1991, V42, P765 CAPLUS
(9) Lee, Y; Angew Makromol Chem 1991, V192, P169 CAPLUS
(10) Matsumoto, M; Separ Sci Technol 1997, V32, P983 CAPLUS
(11) Okay, O; Water Res 1985, V19, P857 CAPLUS
(12) Wolfrom, M; J Am Chem Soc 1959, V81, P1764 CAPLUS

L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1999:273144 CAPLUS
DN 130:326824
ED Entered STN: 04 May 1999
TI Adsorption mechanism of boric acid on saccharide-modified chitosan resin
AU Matsumoto, Michiaki; Matsui, Tomotsugu; Kondo, Kazuo
CS Department of Chemical Engineering and Materials Science, Doshisha University, Kyotanabe, 610-0321, Japan
SO Journal of Chemical Engineering of Japan (1999), 32(2), 190-196
CODEN: JCEJAQ; ISSN: 0021-9592
PB Society of Chemical Engineers, Japan
DT Journal
LA English
CC 49-3 (Industrial Inorganic Chemicals)
Section cross-reference(s): 60

AB An environmentally-friendly resin for boron recovery is developed. The adsorption characteristics of boron on chitosan resins chem. modified by saccharides are investigated for the purpose of the removal of boron from a boron mine and the desulfurizing equipment in **coal**-fired steam power stations, and compared with those of a com. resin (Duolite ES371). First, chitosan derivs. incorporating saccharides were synthesized by reductive N-alkylation, and the products were crosslinked with ethylene glycol diglycidyl ether. The resulting products (SMC resins) were found to exhibit soly. in acidic and basic solns. From the adsorption expt. on the resins (SMC and Duolite resins), it is found that the adsorption mechanism is a complex formation between boron which exists as boric acid or borate in an aq. soln. and the vicinal diol groups of the branched saccharide. The apparent adsorption equil. consts. of boric acid-diol complex and borate-diol salt complex are detd. The adsorption isotherms of boron

correlate well with the Langmuir equation, and the order of the satd. adsorption capacity of boron on SMC resins corresponds to that of the degree of substitution on SMC resins.

ST boric acid recovery chitosan resin adsorption; saccharide modification chitosan resin boron adsorption

IT Wastewater treatment
(adsorption; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT Polymers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(chelating; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT **Polysaccharides**, properties
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(chitosan modified by; adsorption mechanism of boric acid on saccharide-modified chitosan **resin**)

IT 9012-76-4, Chitosan
RL: NUU (Other use, unclassified); USES (Uses)
(adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 7440-42-8P, Boron, preparation 10043-35-3P, Boric acid, preparation
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PUR (Purification or recovery); PREP (Preparation); PROC (Process)
(adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 50-99-7, Glucose, properties 58-86-6, Xylose, properties 59-23-4, Galactose, properties 147-81-9, Arabinose 3458-28-4, Mannose
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(chitosan modified by; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

IT 110119-83-0, Duolite ES371
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(glucamine resin; adsorption mechanism of boric acid on saccharide-modified chitosan resin)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Domard, A; Int J Biol Macromol 1987, V9, P98 CAPLUS
(2) Hano, T; Solv Extr Res Dev, Japan 1994, V1, P146 CAPLUS
(3) Inukai, Y; Advances in Chitin Science 1998, V2, P513
(4) Inukai, Y; Anal Chim Acta 1997, V343, P275 CAPLUS
(5) Inukai, Y; Anal Sci 1997, V13, P221 CAPLUS
(6) Kunin, R; Ind Eng Chem, Prod Res Dev 1964, V3, P304 CAPLUS
(7) Maeda, H; Separ Sci Technol 1995, V30, P3545 CAPLUS
(8) Matsumoto, M; J Chem Eng Japan 1998, V31, P853 CAPLUS
(9) Matsumoto, M; Separ Sci Technol 1997, V32, P983 CAPLUS
(10) Matsumoto, M; Value Adding through Solvent Extraction 1996, P893 CAPLUS
(11) Okay, O; Water Res 1985, V19, P857 CAPLUS
(12) Poslu, K; Hydrometallurgy 1983, V10, P47 CAPLUS
(13) Rorrer, G; Ind Eng Chem Res 1993, V32, P2170 CAPLUS
(14) Seki, H; Ind Eng Chem Res 1996, V35, P1378 CAPLUS
(15) Sinton, S; Macromolecules 1987, V20, P2430 CAPLUS
(16) Tsuboi, I; J Chem Eng Japan 1990, V23, P480 CAPLUS
(17) Yalpani, M; Macromolecules 1984, V17, P272 CAPLUS
(18) Yasuda, S; Bunseki Kagaku 1993, V42, P713 CAPLUS

L3 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1998:780978 CAPLUS
DN 130:68874
ED Entered STN: 14 Dec 1998
TI Effect of polymeric additives to **coal** tar pitch on carbonization behavior and optical texture of resultant cokes
AU Brzozowska, Tatiana; Zielinski, Janusz; Machnikowski, Jacek

eb

h eb c g cg b cg

CS Institute of Chemistry in Plock, Warsaw University of Technology, Plock, 09-400, Pol.
SO Journal of Analytical and Applied Pyrolysis (1998), 48(1), 45-58
CODEN: JAAPDD; ISSN: 0165-2370
PB Elsevier Science B.V.
DT Journal
LA English
CC 51-19 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 38

AB Homogeneous compns. of **coal** tar pitch with 10% addn. of various polymers were prepd. under relatively mild conditions. The effect of a polymer on properties of compn. and yield and optical texture of resultant semi-coke was assessed. There was no correlation between softening point or toluene insol. content and carbonization yield. The addn. of cumarone-indene **resin**, polystyrene, poly(ethylene terephthalate), polypropylene and **polysaccharide** resulted in an increase in carbonization yield by 5-3%. Pitch-polymer compns. gave semicoke of less homogeneous optical texture compared to parent **coal** tar pitch coke. Poly(vinyl chloride) was the only polymer which clearly improved the development of anisotropy on carbonization. The addn. of polypropylene, **polysaccharide** and butadiene-styrene copolymer contributed to the deterioration of the optical texture.

ST **coal** tar pitch carbonization polymer additives coke quality
IT Carbonization
Coal tar pitch
(effect of polymeric additives to **coal** tar pitch on carbonization behavior and optical texture of resultant cokes)
IT Coumarone-indene resins
Polyesters, uses
Polymers, uses
Polysaccharides, uses
RL: MOA (Modifier or additive use); USES (Uses)
(effect of polymeric additives to **coal** tar pitch on carbonization behavior and optical texture of resultant cokes)
IT Coke
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(quality of,; effect of polymeric additives to **coal** tar pitch on carbonization behavior and optical texture of resultant cokes)
IT 9002-86-2, Poly(vinyl chloride) 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9003-55-8, Butadiene-styrene copolymer 25038-59-9, Poly(ethylene terephthalate), uses
RL: MOA (Modifier or additive use); USES (Uses)
(effect of polymeric additives to **coal** tar pitch on carbonization behavior and optical texture of resultant cokes)
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Anon; PL 141756 1986 CAPLUS
(2) Blazso, M; J Anal Appl Pyrolysis 1997, V39, P1 CAPLUS
(3) Brooks, J; Chemistry and Physics of Carbon 1968, V4, P243 CAPLUS
(4) Bujnowska, B; Carbon'94 Ext Abstr 1994, P80
(5) Collin, G; Coal Science and Technology V24
(6) Collin, G; Fuel Process Technol 1997, V50, P179 CAPLUS
(7) Collin, G; Ullmann's Encyclopedia of Industrial Chemistry 1995, VA 26, P91
(8) Eser, S; Carbon 1989, V27, P877 CAPLUS
(9) Honda, H; Carbon 1988, V26, P139 CAPLUS
(10) Kabudzinska, A; Chem Anal (Warsaw) 1996, V41, P459
(11) Kabudzinska, A; Karbo-Energochem-Ekol 1995, V40, P290
(12) Kubica, K; Proceedings of the Symposium on Pitch Binders 1996, P10
(13) Lewis, I; Fuel 1982, V66, P519
(14) Machnikowski, J; Carbon 1991, V29, P371 CAPLUS
(15) Machnikowski, J; Koks Smola Gaz 1988, V33, P118
(16) Marsh, H; Chemistry and Physics of Carbon 1979, V15, P229 CAPLUS
(17) Marsh, H; Introduction to Carbon Science 1989
(18) Marsh, H; Introduction to Carbon Technologies 1997

h eb c g cg b cg eb

(19) Menendez, R; Carbon 1997, V35, P555 CAPLUS
(20) Mochida, I; CHEMTECH 1995, V25, P29 CAPLUS
(21) Mochida, I; Carbon 1975, V13, P489 CAPLUS
(22) Mochida, I; Carbon 1985, V23, P175 CAPLUS
(23) Pajares, J; Proceedings of the Eighth ICCS 1995, V1, P1033
(24) Skoczkowski, K; Technologia produkcji wyrobow weglowo-grafitowych 1995
(25) Stadelhofer, J; Fuel 1981, V60, P877 CAPLUS
(26) Taylor, G; Carbon 1993, V31, P341 CAPLUS
(27) van Krevelen, D; Properties of Polymers 1976
(28) Zielinski, J; ACS Div Fuel Chem 1993, V2, P927
(29) Zielinski, J; Chemik 1994, V46, P188
(30) Zielinski, J; Fuel 1996, V75, P1543 CAPLUS
(31) Zielinski, J; Polimery 1993, V38, P537 CAPLUS
(32) Zielinski, J; Polimery 1995, V40, P591 CAPLUS

L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1981:86836 CAPLUS
DN 94:86836
ED Entered STN: 12 May 1984
TI Gel filtration and structural characteristics of fulvic acids extracted from weathered **coals**
AU Chen, Rong-Feng; Wang, Tian-Li; Lin, Su-Feng; Wang, Shuan-Zhu
CS Honan Chem. Inst., Peop. Rep. China
SO Huaxue Tongbao (1980), (6), 343-5
CODEN: HHTPAU; ISSN: 0441-3776
DT Journal
LA Chinese
CC 51-16 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 73
AB Fulvic acids were extd. from weathered **coals** by ion exchange with a strongly acidic **resin** and sepd. by flocculation with a **polysaccharide** and filtration. The sepd. substances were concd. by desalting for IR anal. Structural characteristics of 4 types of fulvic acids are graphically presented.
ST fulvic acid structure IR; **coal** fulvic acid structure
IT **Coal**
RL: USES (Uses)
(fulvic acids sepd. from weathered, structure of)
IT Fulvic acids
RL: PRP (Properties)
(structure of, from weathered **coals**)
IT Molecular structure-property relationship
(IR spectra, of fulvic acids from weathered **coals**)

L3 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1971:124141 CAPLUS
DN 74:124141
ED Entered STN: 12 May 1984
TI Specific and nonspecific substances in an ordinary chernozem fulvic acid filtrate
AU Dragunov, S. S.; Murzakov, B. G.; Gostenkov, V. F.
CS Inst. Mikrobiol., Moscow, USSR
SO Pochvovedenie (1971), (2), 33-40
CODEN: PVDEAZ; ISSN: 0032-180X
DT Journal
LA Russian
CC 20 (Fertilizers, Soils, and Plant Nutrition)
AB A fulvic acid filtrate was blown through a column contg. activated charcoal and the adsorbed substances were fractionated. The following fractions were obtained: NH4 (A), EtOH (1), EtOH-C6H6 (2), Me2CO (3), aq.

h eb c g cg b cg eb

(4), Me2CO-aq. (5), NH4 (6). Fractionation of A on activated **coal** produced the following addnl. fractions: EtOH (7), Me2CO (8), aq. (9), Me2CO-aq. (10), and NH4 (B); the latter was sepd. on Al2O3 into a nonadsorbed fraction (11), fraction eluted with 2% NH4OH (12), and a fraction desorbed with H2SO4 (13). The fractions were chromatographed using gas-liq. chromatog. The C/H, H/C, C/O, and O/H ratios, the org. acids, and other substances were detd. Fraction 1 was a resinous substance with many aromatic structures, the pyrolysis product of which contained large amts. of PhOH and pyrocatechol. Fractions 7 and 8 were similar to fraction 1 but had a more acid nature and **resin** acids as their dominant constituents. Fractions 4 and 9 contained several **polysaccharides**, were white powders, easily sol. in H2O. Fraction 11 contained a considerable concn. of COOH groups; fractions 6, 12, and 13 contained H2O-sol. org. substances. It is believed that the variability of soil humic fractions is responsible for the properties of soil org. substances and for the compn. of the soil microflora.

ST chernozem soil fulvate; soil org matter fulvate fraction; chromatog fulvate fraction soil

IT Soils
(chernozem, fulvic acids in, compn. of)

IT Fulvic acids
RL: BIOL (Biological study)
(fractionation of, chernozem soils)

L3 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1967:30269 CAPLUS
DN 66:30269
ED Entered STN: 12 May 1984
TI **Polysaccharide-resin** coagulants for aqueous suspensions
IN Watanabe, Hiroshi; Matsunaga, Hideo; Inoue, Masao
PA Toyo Koatsu Industries, Inc.
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
NCL 210052000
CC 46 (Surface Active Agents and Detergents)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3285849		19661115	US	19620810

PI US 3285849

AB An aq. soln. of an inorg. salt, such as NaCl, Al2(SO4)3, FeCl3, Fe2O3, or BaCl2.H2O, and a reaction product of an urea resin, such as an urea-HCHO resin (I) or urea-melamine-HCHO resin, and an modified oxidized starch the OH group of which is replaced by an OCH2CH2OH, OCH2CH2CN, OCH2CH2CONH2, or OCH2-CH2CO2R (R = alkyl) group is a better coagulant than an inorg. salt and the resin product alone for aq. **coal** dust suspensions, aq. S suspensions, or industrial waste water. Thus, 9 parts partly (73.9%) hydroxyethylated oxidized starch and 1 part 40% aq. cationic I were dissolved in H2O to give a 25% soln. The pH of the soln, was adjusted to 5 and the mixt. was heated at 60° for 45 min. The product had a viscosity of 5 poises and the soln. was dild. to a solids content of 0.01%. A 7% aq. coaldust suspension was tested with NaCl and Al2(SO4)3 alone, the polymer soln., and the mixt. of polymer soln. and inorg. salt. Use of a mixt. of 1-4% NaCl or Al2(SO4)3 and 5-10 ppm. of the polymer product gave a clear, transparent supernatant with comparable sedimentation velocity to that obtained with the polymer product alone. The inorg. salt alone had no effect on the suspension.

ST COAGULANTS AQ SUSPENSIONS; UREA **RESIN**-STARCH COAGULANTS; SUSPENSIONS AQ COAGULANTS; MELAMINE **RESIN**-STARCH COAGULANTS; **RESIN POLYSACCHARIDE** COAGULANTS; **POLYSACCHARIDE-RESIN** COAGULANTS; **COAL** DUST SUSPENSION COAGULANTS; SULFUR SUSPENSION COAGULANTS; WASTE WATER COAGULANTS;

h eb c g cg b cg eb

STARCH-**RESIN** COAGULANTS

IT Coagulation
(agents for, inorg. salt-melamine (or urea) condensation product-oxidized starch as, for aq. suspensions)

IT **Coal**
RL: USES (Uses)
(dust, coagulation and sedimentation of aq. suspensions of)

IT Sedimentation
(in suspensions (aq.) by inorg. salt-melamine (or urea) condensation product-oxidized starch)

IT Starch, hydroxyethyl oxidized
RL: USES (Uses)
(coagulants from inorg. salt, melamine (or urea) condensation products in, for aq. suspensions)

IT Urea condensation products, coagulants from inorg. salts, uses and miscellaneous
RL: USES (Uses)
(oxidized starch and, for aq. suspensions)

IT p-Dioxane, mercury complexes
RL: USES (Uses)
(spectrum (ir) of, for)

IT 9003-08-1 25036-13-9, uses and miscellaneous
RL: USES (Uses)
(coagulants from inorg. salts, oxidized starch and, for aq. suspensions)

IT 7647-14-5, uses and miscellaneous 7705-08-0, uses and miscellaneous
10043-01-3 10361-37-2, uses and miscellaneous
RL: USES (Uses)
(coagulants from melamine (or urea) condensation products, oxidized starch and)

L3 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1963:14101 CAPLUS
DN 58:14101
OREF 58:2296d-e
ED Entered STN: 22 Apr 2001
TI Gravimetric investigations of the decomposition behavior of low-rank fuels
AU Abel, Otto; Luther, Horst
CS Bergakad., Clausthal/Harz, Germany
SO Erdoel und Kohle (1962), 15(2), 90-5
CODEN: ERKOAJ; ISSN: 0367-1305
DT Journal
LA Unavailable
CC 26 (Coal and Coal Derivatives)
AB By thermogravimetric investigations of sugars, **polysaccharides**, celluloses, lignins, humic acids, and bitumens of peats and brown **coals**, correlations were made of the max. of the degasification ranges of these substances with the decompn. peaks of the following classes of compds.: 200°, 210°, and 225° sugars; 240° **polysaccharides** and tannins; 260° hemieelluloses, **polysaccharides**, and **resins**; 280° hemicelluloses; 295° celluloses; 320° lignins; 335° and 350° lignins, humic acids, humins, and bitumens; 375° humic acids, humins, bitumens, and lignins; 395°, 405°, and 425° bitumens and humins.

IT Radioelements
(absorption of, by **coal**)

IT **Coal**, brown and(or) Lignitous **coal**
(bitumen of, thermal decompn. of)

IT Peat
(bitumens of, thermal decompn. of)

IT Bitumens

h eb c g cg b cg eb

Humins
Resins
(decompn. by heat)
IT Humic acids
Sugars
Tannins
(decompn. of, by heat)
IT Polysaccharides
(decompn., by heat)
IT 9004-34-6, Cellulose 9005-53-2, Lignin 9034-32-6, Hemicellulose
(decompn., by heat)

L3 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1959:69586 CAPLUS
DN 53:69586
OREF 53:12633a-b
ED Entered STN: 22 Apr 2001
TI Improvement of the clarification of wash water by the addition of flocculating agents
AU v. Pelser-Berensberg, B.; Schuster, A.; Thone, L.
SO Aachener Bl. Aufbereiten-Verkoken-Brikett. (1956), 6, 65-88
From: Fuel Abstr. 20, Abstr. No. 3606(1956)
DT Journal
LA Unavailable
CC 21 (Fuels and Coal Products)
AB Expts. were made on the use of materials such as **polysaccharides** and **resins** in the presence of electrolytes, for clarification of wash water for **coal** prepn.
IT **Coal**
(cleaning or washing of, of Bureinskii)
IT **Coal**
(cleaning or washing of, water treatment for)
IT 7732-18-5, Water
(purification or conditioning of, coagulation, for **coal** washing)

L3 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text | Citing References

AN 1924:6154 CAPLUS
DN 18:6154
OREF 18:849h-i
ED Entered STN: 16 Dec 2001
TI Chemistry of Japanese plants. II. Composition of fossil wood
AU Komatsu, Shigeru; Ueda, Hidenosuke
SO Mem. Col. Sci. Kyoto. Imp. Univ. (1923), 7A, 7-13
DT Journal
LA Unavailable
CC 11D (Biological Chemistry: Botany)
AB The investigation was undertaken to throw light on the mechanism of **coal** formation. The fossil wood, umoregi (A), [which is apparently brown lignite rather than fossil wood--Abstractor] presumably belongs to a species of Sequoia; hence the analyses of A were compared with analytical data obtained in the case of redwood (Sequoia sempervirens). A contained 1.03% ash, approx. 6% **resin**, 1.8% methyl-pentosans, 5.1% **polysaccharides** other than cellulose, 56.2% lignin, 29.4% cellulose. Apparently pentosans were absent. Ultimate analysis showed C 61, H 6.0, S 0.8 and ash 2.8%. The **resin** contained 73.8% C and 6.65% H. It is evident that in the process of change from wood to "umoregi" 20% of cellulose and 4% of other **polysaccharides** are destroyed and the lignin content is increased by about 25%. Approx. 2% **resin** is accumulated during the change.

h eb c g cg b cg eb